



November 10, 2016

Mr. James Augustyn  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region 5  
25063 Center Ridge Road  
Westlake, Ohio 44145

**Subject: Data Validation Report  
Harper Industries Asbestos Site  
EPA Contract No. EP-S5-13-01  
Technical Direction Document No. S05-0001-1609-004  
Document Tracking No. 1189A-G**

Dear Mr. Augustyn:

Tetra Tech Inc. (Tetra Tech) is submitting this Data Validation Report for 47 air samples (including 11 field blanks and one lot blank) collected at the Harper Industries Asbestos site. The samples were collected during September and October 2016. The air samples were analyzed for asbestos by phase contrast microscopy by QuanTEM Laboratories. Tetra Tech received the last data package on October 31, 2016.

The data underwent Stage 1 verification and validation in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009).

No rejection or qualification of the data was necessary. The results may be used as reported by the laboratory.

If you have any questions regarding this data validation report, please call me at (509) 688-5957.

Sincerely,

A handwritten signature in blue ink that reads 'Deb Kutsal'.

Deb Kutsal  
START Chemist

Enclosure

cc: Kevin Scott, Tetra Tech Program Manager  
Wes Williams, Tetra Tech Project Manager  
TDD File

## **ATTACHMENT 1**

### **DATA VALIDATION REPORT ASBESTOS SAMPLE RESULTS**

**DATA VALIDATION CHECKLIST – STAGE 1**  
**EPA REGION 5 START CONTRACT**

<b>Site Name</b>	Harper Industries Asbestos Site	<b>TDD No.</b>	0001-1609-004
<b>Document Tracking No.</b>	1189A through G	<b>Technical Reviewer (signature and date)</b>	<i>Jessica A. Vickers</i> November 10, 2016
<b>Data Reviewer (signature and date)</b>	<i>Debbie Kuhl</i> November 8, 2016	<b>Laboratory</b>	QuanTEM Laboratories
<b>Laboratory Report Nos.</b>	270539, 270588, 270594, 270682, 270976, 271286, and 271348		
<b>Analyses</b>	Asbestos by NIOSH Method 7400 (Phase Contrast Microscopy)		
<b>Matrix and Number of Samples</b>	270539 - 13 air samples including 3 field blanks 270588 - 7 air samples including 1 field blank and 1 lot blank 270594 - 4 air samples 270682 - 3 air samples including 1 field blank 270976 - 8 air samples including 2 field blanks 271286 - 9 air samples including 3 field blanks 271348 - 3 air samples including 1 field blank		
<b>Field Duplicate Pairs</b>	None		
<b>Field Blanks</b>	<b>Field blanks:</b> FLD Blank, HI-FB-01-100316, HI-FB-01-100416, HI-FB-01-100516, HI-FB-01-100616, HI-FB-01-100716, HI-FB-01-101216, HI-FB-01-101316, HI-FB-01-101416, HI-FB-01-101816, and HI-FB-01-101916 <b>Lot blank:</b> Lot Blank		

**INTRODUCTION**

This checklist summarizes the Stage 1 verification performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009).

**OVERALL EVALUATION**

No rejection or qualification of the data was necessary. The results may be used as reported by the laboratory.

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	



## DATA VALIDATION CHECKLIST – STAGE 1 EPA REGION 5 START CONTRACT

### Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

### Method blanks:

Within Criteria	Exceedance/Notes
NA	No method blank results were provided.

### Field blanks:

Within Criteria	Exceedance/Notes
N	Asbestos fibers were found in perimeter field blank samples HI-FB-01-100416 (1 fiber) and HI-FB-01-100616 (1 fiber). Associated sample results were either non-detect or greater than 10 times the associated blank value; therefore, no data were qualified.

### System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
NA	

### MS/MSD:

Within Criteria	Exceedance/Notes
NA	

### Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	No laboratory duplicate results were provided.



**DATA VALIDATION CHECKLIST – STAGE 1**  
**EPA REGION 5 START CONTRACT**

**Field duplicates:**

Within Criteria	Exceedance/Notes
NA	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
NA	

**Sample dilutions:**

Within Criteria	Exceedance/Notes
NA	None of the samples required dilution.

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

## DATA VALIDATION CHECKLIST – STAGE 1 EPA REGION 5 START CONTRACT

Other [specify]:

Within Criteria	Exceedance/Notes
NA	

### Overall Qualifications:

See results summary pages attached for any changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.





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## Phase Contrast Microscopy Analysis Report

**QuantEM Set ID:** 270539  
**Date Received:** 10/05/16  
**Received By:** Peyton Awbrey  
**Analyst:** Leigh Armstrong  
**Date of Report:** 10/18/2016  
**Methodology:** NIOSH 7400, Issue 2  
**AIHA Lab Number:** 101352

**Client:** Environmental Restoration, LLC  
 7007 Engle Rd., Suite E  
 Middleburg Heights, OH 44130

**Acct. No.:** B732

**Project:** Harper Industries  
**Location:** Cleveland, OH  
**Project No.:** HI5-05

QuantEM Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01-100316	3920	7	100	8.60	0.000844	0.000687	0.000357	0.00193
002	HI-AA-L02-100316	4370.7	Occluded	N/A	N/A	N/A	N/A	N/A	N/A
003	HI-FB-01-100316	Blank	0	100	N/A	N/A	N/A	N/A	N/A
004	HI-AA-L01-100416	4032	4	100	<7.00 U	<0.000668 U	0.000668	N/A	N/A
005	HI-AA-L02-100416	4042.5	4	100	<7.00 L	<0.000666 L	0.000666	N/A	N/A
006	HI-FB-01-100416	Blank	1	100	N/A	N/A	N/A	N/A	N/A
007	HI505_2EQ_10416	65.25	5.5	100	<7.00 U	<0.0412 U	0.0412	N/A	N/A
008	HI505_1EQ_10416	61.47	5	100	<7.00	<0.0438	0.0438	N/A	N/A
009	HI505_03EQ_10416	70.37	4	100	<7.00	<0.0382	0.0382	N/A	N/A
010	HI505_01LA_10416	72.09	3	100	<7.00 L	<0.0373 L	0.0373	N/A	N/A
011	HI505_01AA_10416	1049.76	57	100	72.3	0.0265	0.00256	0.0161	0.0468

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Results have been blank corrected per the NIOSH 7400 method, as applicable.

DJK  
11/7/16



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## Phase Contrast Microscopy Analysis Report

**Quantem Set ID:** 270539  
**Date Received:** 10/05/16  
**Received By:** Peyton Awbrey  
**Analyst:** Leigh Armstrong  
**Date of Report:** 10/18/2016  
**Methodology:** NIOSH 7400, Issue 2  
**AIHA Lab Number:** 101352

**Client:** Environmental Restoration, LLC  
7007 Engle Rd., Suite E  
Middleburg Heights, OH 44130

**Acct. No.:** B732

**Project:** Harper Industries  
**Location:** Cleveland, OH  
**Project No.:** HI5-05

Quantem Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
012	HI505_02AA_104 16	1072.37	7	100	8.60	0.00309	0.00251	0.00130	0.00707
013	FLD Blank	Blank	0	100	N/A	N/A	N/A	N/A	N/A

Occluded sample. Amount of particulate on sample exceeds NIOSH 7400 Guidelines.

**Authorized Signature:** \_\_\_\_\_

Leigh Armstrong, Analyst

DJL  
11/7/16

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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## Phase Contrast Microscopy Analysis Report

Quantem Set ID: 270588

Date Received: 10/06/16

Received By: Peyton Awbrey

Analyst: Leigh Armstrong

Date of Report: 10/7/2016

Methodology: NIOSH 7400, Issue 2

AIHA Lab Number: 101352

Client: Environmental Restoration, LLC  
7007 Engle Rd., Suite E  
Middleburg Heights, OH 44130

Acct. No.: B732

Project: Harper Industries

Location: Cleveland, OH

Project No.: H15-05

Quantem Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm <sup>2</sup> )	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01-100516	3880	6	100	7.64	0.000759	0.000693	0.000320	0.00176
002	HI-AA-L02-100516	3882.4	11	100	14.0	0.00139	0.000692	0.000690	0.00286
003	HI-PB-01-100516	Blank	0	100	N/A	N/A	N/A	N/A	N/A
004	HI505_04EQ_10516	870.44	7	100	8.92	0.00394	0.00309	0.00175	0.00885
005	HI505_05EQ_10516	886.19	Occluded	N/A	N/A	N/A	N/A	N/A	N/A
006	HI505_01LA_10516	908.04	4	100	7.00 U	0.00296 U	0.00296	N/A	N/A
007	Lot Blank	Blank	0	100	N/A	N/A	N/A	N/A	N/A

Occluded sample. Amount of particulate on sample exceeds NIOSH 7400 Guidelines.

Authorized Signature: \_\_\_\_\_

Leigh Armstrong, Analyst

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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## Phase Contrast Microscopy Analysis Report

Quantem Set ID: 270594

Date Received: 10/03/16

Received By: Leigh Armstrong

Analyst: Leigh Armstrong

Date of Report: 10/15/2016

Methodology: NIOSH 7400, Issue 2

AIHA Lab Number: 101352

Client: Environmental Restoration, LLC  
7007 Engle Rd., Suite E  
Middleburg Heights, OH 44130

Acct. No.: B732

Project: Harper Industries

Location: Cleveland, Ohio

Project No.: N/A

Quantem Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	001	919.56	9	100	11.5	0.00480	0.00293	0.00228	0.0102
002	002	901.36	9	100	11.5	0.00490	0.00298	0.00232	0.0104
003	003	1987.43	4	100	<del>7.00</del> U	<del>0.00135</del> U	0.00135	N/A	N/A
004	004	2275.47	6	100	7.64	0.00129	0.00118	0.000547	0.00301

Authorized Signature: \_\_\_\_\_

Leigh Armstrong, Analyst

DTK  
11/7/16

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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## Phase Contrast Microscopy Analysis Report

QuantEM Set ID: 270682

Date Received: 10/07/16

Received By: Peyton Awbrey

Analyst: Leigh Armstrong

Date of Report: 10/11/2016

Methodology: NIOSH 7400, Issue 2

AIHA Lab Number: 101352

Client: Environmental Restoration, LLC

1666 Fabick Dr

Fenton, MO 63026

Acct. No.: B732

Project: Harper Industries

Location: Cleveland, OH

Project No.: HI3-05

QuantEM Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01- 100616	3964.1	4	100	7.00 U	0.000679 U	0.000679	N/A	N/A
002	HI-AA-L02- 100616	3969.9	11	100	12.7	0.00124	0.000678	0.000552	0.00267
003	HI-FB-01-100616	Blank	1	100	N/A	N/A	N/A	N/A	N/A

Authorized Signature: \_\_\_\_\_

Leigh Armstrong, Analyst

DJL  
11/7/16

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for &gt;50 fibers.

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Results have been blank corrected per the NIOSH 7400 method, as applicable.



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## Phase Contrast Microscopy Analysis Report

**QuantEM Set ID:** 270976  
**Date Received:** 10/13/16  
**Received By:** Peyton Awbrey  
**Analyst:** Leigh Armstrong  
**Date of Report:** 10/14/2016  
**Methodology:** NIOSH 7400, Issue 2  
**AIHA Lab Number:** 101352

**Client:** Environmental Restoration, LLC  
 1666 Fabick Dr  
 Fenton, MO 63026

**Acct. No.:** B732

**Project:** Harper Industries  
**Location:** Cleveland OH.  
**Project No.:** HI5-05

QuantEM Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm <sup>2</sup> )	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01-100716	2943.9	4	100	7.00	0.000913	0.000913	N/A	N/A
002	HI-AA-L02-100716	4027.5	5	100	7.00	0.000668	0.000668	N/A	N/A
003	HI-FB-01-100716	Blank	0	100	N/A	N/A	N/A	N/A	N/A
004	HI-AA-L01-101216	3988.5	7	100	8.92	0.000860	0.000674	0.000381	0.00193
005	HI-AA-L02-101216	4032.7	6	100	7.64	0.000730	0.000668	0.000309	0.00170
006	HI-FB-01-101216	Blank	0	100	N/A	N/A	N/A	N/A	N/A
007	HI505_06EQ_101216	1033.6	8	100	10.2	0.00380	0.00260	0.00175	0.00828
008	HI505_02LA_101216	1004.6	20	100	25.5	0.00976	0.00268	0.00540	0.0185

**Authorized Signature:** \_\_\_\_\_

Leigh Armstrong, Analyst

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Results have been blank corrected per the NIOSH 7400 method, as applicable.

OK  
11/7/16



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## Phase Contrast Microscopy Analysis Report

**Quantem Set ID:** 271286  
**Date Received:** 10/19/16  
**Received By:** Karen Braley  
**Analyst:** Leigh Armstrong  
**Date of Report:** 10/20/2016  
**Methodology:** NIOSH 7400, Issue 2  
**AIHA Lab Number:** 101352

**Client:** Environmental Restoration, LLC  
 1666 Fabick Dr  
 Fenton, MO 63026

**Acct. No.:** B732

**Project:** Harper Industries  
**Location:** Cleveland, OH  
**Project No.:** HI5-05

Quantem Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01-101316	4113.2	3	100	<7.00 U	<0.000653 U	0.000653	N/A	N/A
002	HI-AA-L02-101316	4133.6	5	100	<7.00 U	<0.000650 U	0.000650	N/A	N/A
003	HI-FB-01-101316	Blank	0	100	N/A	N/A	N/A	N/A	N/A
004	HI-AA-L01-101416	3182.6	4.5	100	<7.00 U	<0.000846 U	0.000846	N/A	N/A
005	HI-AA-L02-101416	3252.6	4	100	<7.00 U	<0.000828 U	0.000828	N/A	N/A
006	HI-FB-01-101416	Blank	0	100	N/A	N/A	N/A	N/A	N/A
007	HI-AA-L01-101816	4158.6	13	100	16.6	0.00153	0.000647	0.000790	0.00307
008	HI-AA-L01-101816	4246.2	8	100	10.2	0.000924	0.000633	0.000426	0.00201
009	HI-FB-01-101816	Blank	0	100	N/A	N/A	N/A	N/A	N/A

DJL  
11/7/16

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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## Phase Contrast Microscopy Analysis Report

**Quantem Set ID:** 271348

**Date Received:** 10/20/16

**Received By:** Karen Braley

**Analyst:** Leigh Armstrong

**Date of Report:** 10/21/2016

**Methodology:** NIOSH 7400, Issue 2

**AIHA Lab Number:** 101352

**Client:** Environmental Restoration, LLC  
1666 Fabick Dr  
Fenton, MO 63026

**Acct. No.:** B732

**Project:** Harper Industries

**Location:** Cleveland, OH

**Project No.:** HI5-05

Quantem Sample ID	Client Sample ID	Air Volume (liters)	Fibers	Fields	Fiber Density (f/mm2)	Fiber Concentration (f/cc)	Detection Limits (f/cc)	95% LCL (f/cc)	95% UCL (f/cc)
001	HI-AA-L01- 101916	3962.4	11	100	14.0	0.00136	0.000679	0.000677	0.00280
002	HI-AA-L02- 101916	3950.4	6	100	7.64	0.000744	0.000680	0.000314	0.00173
003	HI-FB-01-101916	Blank	0	100	N/A	N/A	N/A	N/A	N/A

**Authorized Signature:**

Leigh Armstrong, Analyst

DJL  
11/7/16

Laboratory Sr: 0.56 for 5 to 20 fibers. 0.18 for 20 to 50 fibers. 0.20 for >50 fibers.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

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